

Smog Check Inspection Procedures and Equipment



Statute Change Overview

- Assembly Bill 2289 requires inspection procedure changes for newer vehicles:
 - OBD in lieu of ASM / TSI on 2000+ model years
 - BAR cannot implement before January 1, 2013

Regulation Change Overview

- Inspection procedures revised in Smog Check Manual
- Smog Check Manual now contains required equipment
- Updated OBD failure criteria
- Deleted Consumer Information Sheet for Visible Smoke Test

Draft regulation will be available on Web site www.smogcheck.ca.gov

Implementation Schedule

- January 2013 – Anticipated draft regulations become law
- Summer 2013 - New inspection procedures implemented along with any equipment changes
 - Begin using new Smog Check Manual

Inspection Procedures

SMOG CHECK MANUAL



Test Requirements Table
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REQUIRED TESTS	BAR-97			OBD Inspection System (OIS)		
	Gasoline 1976 to 1995	Gasoline 1996 to 1999	Gasoline 2000 and newer exceptions (1)	Hybrid 2000 and newer (2)	Diesel 1998 and newer (3)	Gasoline 2000 and newer
Tailpipe Inspections: (see section 1.2)						
Acceleration Simulation Mode (ASM) or Two Speed Idle (TSI) (4)	✓	✓	✓			
Visual Inspections: (see section 1.3)						
Crankcase Emissions Controls	✓	✓	✓	✓	✓	✓
Thermostatic Air Cleaner	✓	✓				
Fuel Evaporative System (EVAP)	✓	✓	✓	✓		✓
Exhaust Gas After Treatment Systems	✓	✓	✓	✓	✓	✓
Exhaust Gas Recirculation (EGR)	✓	✓	✓	✓	✓	✓
Ignition Spark Controls	✓	✓	✓	✓		✓
Fuel Metering Systems	✓	✓	✓	✓	✓	✓
Air Injection System	✓	✓	✓	✓		✓
Computers, Sensors, and Switches	✓	✓	✓	✓	✓	✓
Other Emission Related Components	✓	✓	✓	✓	✓	✓
Liquid Fuel Leak (section 1.3.3)	✓	✓	✓	✓		✓
Visible Smoke Test (section 1.3.4)	✓	✓	✓		✓	✓
Functional Inspections: (see section 1.5)						
On-Board Diagnostics (OBD)		✓	✓	✓	✓	✓
Malfunction Indicator Light (MIL)	✓	✓	✓	✓	✓	✓
Exhaust Gas Recirculation (EGR) (5)	✓					
Ignition Timing	✓					
Fuel Cap Integrity	✓					
Low Pressure Fuel Evaporative Test (LPFET)	✓					

(1) Some model-year 2000 and newer vehicles will require a tailpipe test on the BAR-97 EIS. These include vehicles with problem OBDII systems (as identified by BAR) or vehicles without OBDII; e.g., over 14,000 GVWR, some federally certified emissions.

(2) Hybrid vehicles are powered by both internal combustion and electric power sources.

(3) Diesel-powered vehicles with a GVWR greater than 14,000 lbs. are exempt from the Smog Check Program.

(4) ASM required for vehicles registered in Enhanced program areas, unless vehicle is incompatible with dynamometer test, then TSI shall be performed. TSI required in basic and change of ownership areas.

(5) The EGR functional inspection is only performed in conjunction with a TSI tailpipe test.

Emissions Test Changes

- No tailpipe test on most 2000 and newer model years, except:
 - Over 14,000 GVWR
 - Vehicles without OBDII systems (e.g., kit cars)
- 2000 and newer Hybrids get OBD and visual inspections

Functional Test Changes

- Fuel Cap test limited to 1995 and older
- Timing test limited to 1995 and older
- OBD readiness monitors revised
 - Gasoline:
 - One monitor allowed for 1996 to 1999
 - Only the evaporative monitor for 2000 and newer
 - Diesel:
 - Zero monitors allowed for 1998 to 2006
 - Only the exhaust after-treatment monitor (e.g., particulate filter) for 2007 and newer

Inspection Procedure Change Summary

Today's Procedure

- 76+ Tailpipe Test
- 76-99 Fuel Cap Test
- 76+ Timing (if adjustable)
- No Hybrid Test Procedures
- 96+ OBD Test

New Procedure

- 76-99 Tailpipe Test
- 76-95 Fuel Cap Test
- 76-95 Timing (if adjustable)
- Hybrid OBD Testing
- Tighter OBD failure criteria

Equipment Requirements

SMOG CHECK MANUAL



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Section 1.8

Equipment and Materials Requirements

- New Smog Check Manual table shows requirements for all station types
 - Choose column for your station type
 - STAR Test Only
 - Non-STAR Test Only
 - STAR Test and Repair
 - Non-STAR Test and Repair
 - Table on next slide

What Equipment is Required?

<u>EQUIPMENT AND MATERIALS REQUIREMENTS</u>					
EQUIPMENT / MATERIALS		STATION TYPE			
		STAR Test Only	Test Only	STAR Test and Repair	Test and Repair
BAR Certified Equipment	BAR-97 Emissions Inspection System (EIS) with most current hardware and software	√	(1)	√	(1)
	OBD Inspection System (OIS) with hardware and software necessary to conduct OBD inspections	√	(2)	√	(2)
	Low Pressure Fuel Evaporative Tester (LPFET) and Operator's Manual	√	(3)	√	(3)
	Fuel cap tester, adapters, and adapter guide	√	(3)	√	(3)

- (1) Required when performing a tailpipe emission inspection on vehicles.
 (2) Required when performing the OBD test on model-year 2000 and newer vehicles.
 (3) Required when inspecting 1976-1995 model-year vehicles with evaporative control systems.

What Equipment is Required?

<u>EQUIPMENT AND MATERIALS REQUIREMENTS</u>				
EQUIPMENT / MATERIALS	STATION TYPE			
	STAR Test Only	Test Only	STAR Test and Repair	Test and Repair
Ignition Timing Light capable of measuring ignition advance	√	(4)	√	(4, 5)
Hand Vacuum Pump and Gauge	√	(5)	√	√
Tire pressure gauge	√	√	√	√
Tools necessary to inspect vehicle ignition, fuel delivery, and emission control systems	√	√	√	√
Smog Check Manual & Reference Guide	√	√	√	√

(4) Required when inspecting and / or repairing 1976-1995 model-year vehicles with adjustable timing.

(5) Required when inspecting and / or repairing vehicles with spark ignition engines.

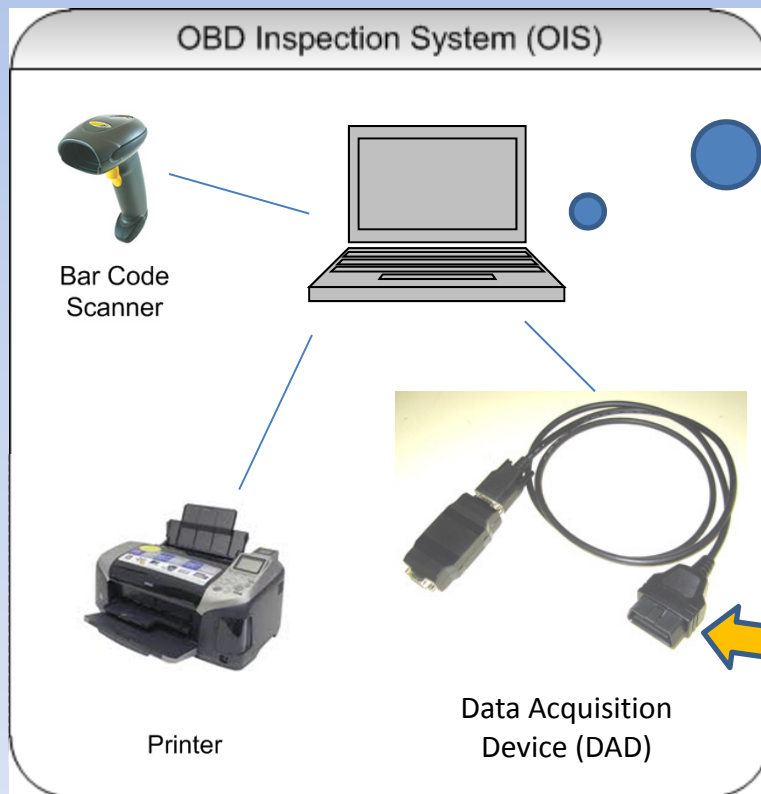
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OBD Inspection System (OIS)

- Data Acquisition Device (DAD) hardware
 - BAR Certified device from equipment manufacturer
- Ancillary equipment (computer, barcode scanner, printer)
 - Off-the-shelf equipment that meets minimum performance standards (e.g., Windows 7 w/ 32 bit, etc.)
- Web-based inspections
 - High Speed Internet connection
 - No dial up internet allowed
- State owned software

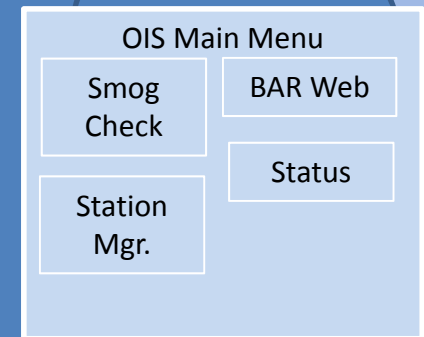


OBD Inspection System (OIS)



High Speed
Internet
Connection

Web-based
Software



Stations may purchase the OIS equipment individually or from an entity packaging the entire OIS.

Percent of Initial Inspections

Calendar Year 2011
Statewide Average

Model Years	Test Equipment	Percent of Inspections
1976 – 1999	BAR-97	42%
2000 and newer	OIS	58%

Contact

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